



SOLVAY MINERALS

BA

July 9, 2003

Dan Olson
WDEQ-Air Quality Division
122 W 25th
Cheyenne, WY 82002



RE: Air Quality Permit CT-1347, Condition 12

Dear Dan:

Condition 12 of Air Quality Permit CT-1347 states that opacity limits for AQD #80 and #82 will be set based on correlation of the units COM measured opacity during their initial performance testing and first six months of operation. Enclosed are charts graphically representing mass emissions versus opacity from initial performance tests, and a summary sheet of opacity readings for AQD #80 "D" Train Calciner and AQD #82 "D" Train Dryer.

The following table contains the particulate emission rates and opacity readings for AQD #80 and #82 during the initial performance tests. AQD #80 was tested March 1 and 2, 2001, with the test report submitted to the Division on May 21, 2001. AQD #82 was tested June 11 and 12, 2001, with the test report submitted July 25, 2001. The stack testing was conducted per EPA Method 5 for front half, and EPA Method 202 for back half inorganic, as required.

AQD #80 "D" Train Calciner			AQD #82 "D" Train Dryer		
Run #	pph	% opacity	Run #	pph	% opacity
1	5.43	1.6	1	0.79	4.0
2	7.18	1.5	2	0.94	2.9
3	11.2	1.3	3	0.93	4.3

As evidenced by the data, there is no correlation between particulate emission rates and opacity, when opacity is less than 5%. This data is also displayed in the attached graphs.

Due to unit down time during the first six months of operation of both AQD #80 and #82, seven months of data was used instead of six. March through September 2001 data was used for AQD #80, and April through October 2001 data was used for AQD #82. This data is summarized in the attached tables.

For AQD #80, 99.9% of the opacity readings were equal to or less than 20% opacity, with the monthly average of that data set ranging from 0.53 to 2.03 % opacity. Adding

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three standard deviations to the average to account for 99% of the data resulted in a monthly high of 4.9% opacity and low of 1.4% opacity. Of that same data set (readings equal to or less than 20% opacity), 98.8 percent were less than or equal to 5% opacity, 99.8 were equal to or less than 10%, and 99.9 percent were less than or equal to 15% opacity.

Analysis of AQD #82 data resulted in 99.1% of the readings being equal to or less than 20% opacity, with the monthly average of that data set ranging from 2.58% to 4.61% opacity. Adding three standard deviations to the average to account for 99% of the data resulted in a monthly high of 7.9% and low of 3.7%. Of that same data set (readings equal to or less than 20% opacity), 97.4 percent were less than or equal to 5% opacity, 99.5 were equal to or less than 10%, and 99.8 percent were less than or equal to 15% opacity.

In determining an appropriate opacity limit less than 20%, the accuracy of the monitors, which is $\pm 2\%$ opacity, must be taken into consideration. Although analysis of the opacity data may suggest setting the limits lower than 15% for AQD #80, "D" Calciner, we recommend the Division set the limit at no less than 15%, which is the limit set for OCI's similar unit 6ES-10. We recommend a 10% limit set for AQD #82, "D" Dryer. Limits lower than those may pose a competitive disadvantage for Solvay Minerals.

If you have any questions regarding the information, or would like to discuss the opacity limits, do not hesitate to contact me at (307) 872-6571.

Respectfully submitted,



Dolly A. Potter

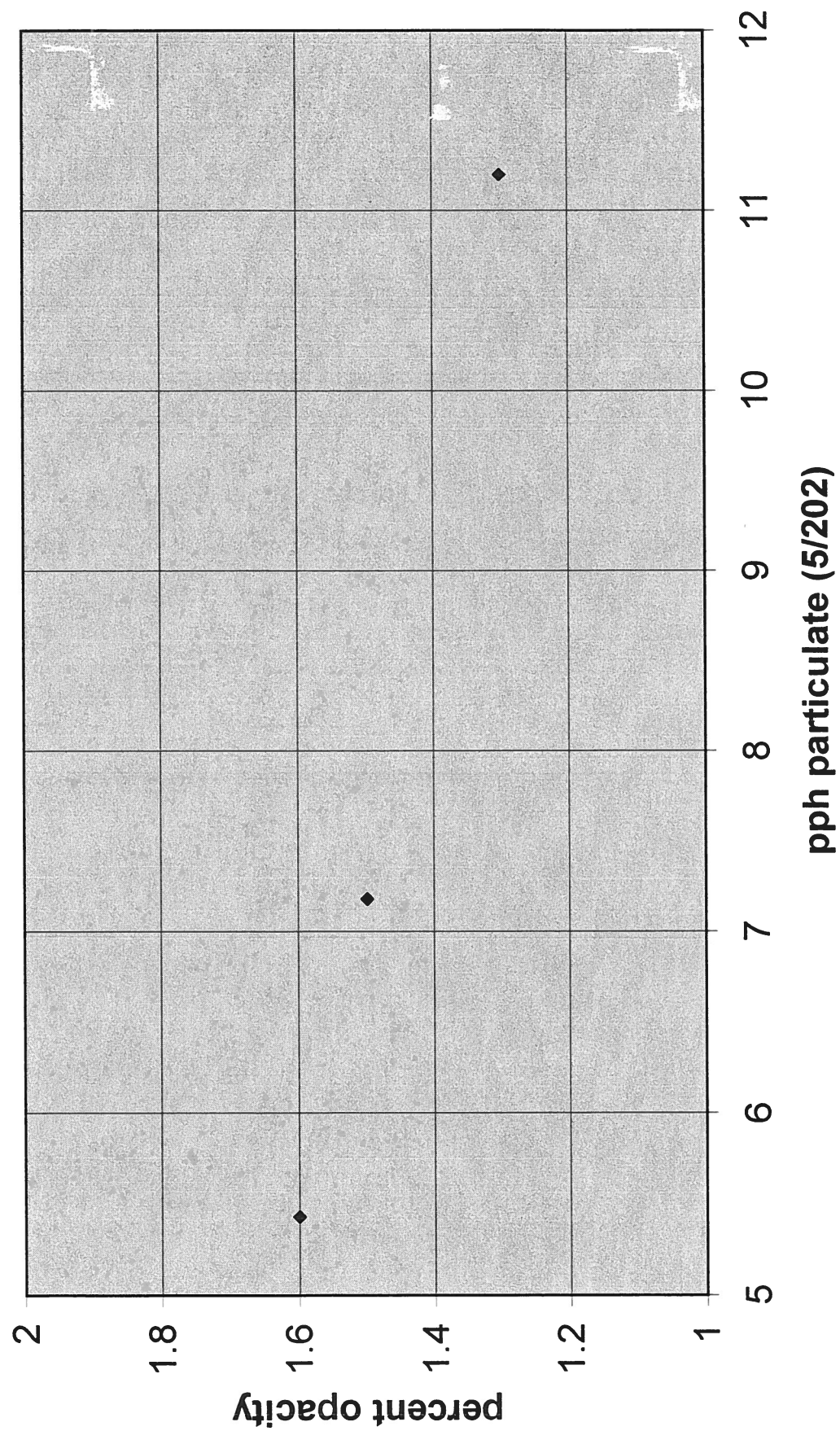
Environmental Services Supervisor

Enclosures

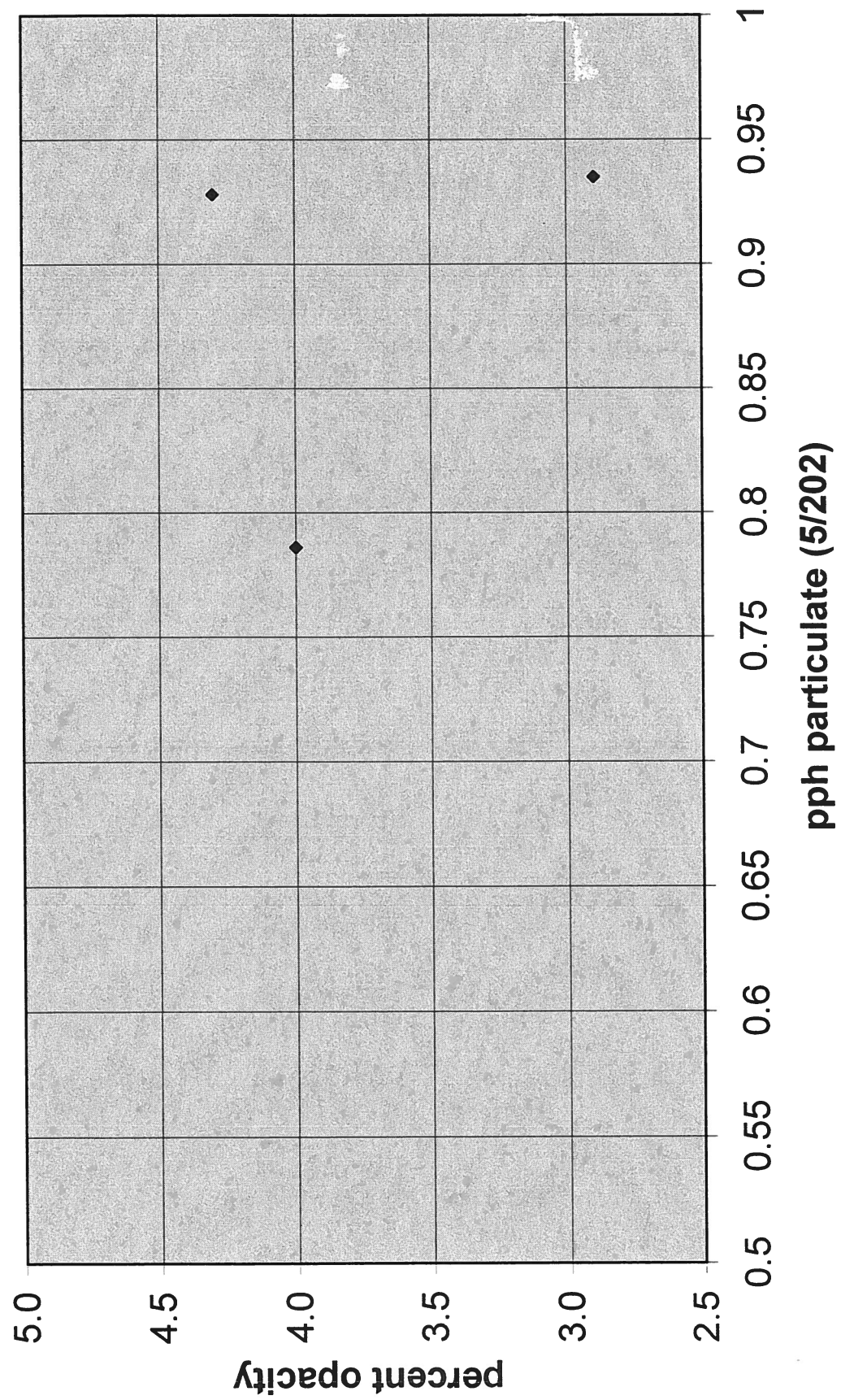
cc: Tony Hoyt

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Calcliner (AQD #80)



Dryer (AQD #82)



AQD #80, "D" Train Calciner, Calciner #4

2001	readings possible	unit down	monitor outage or calib/audit	available readings	readings <= 20%	percent <= 20%	average <= 20%	std dev <= 20%	Ave+3std	readings <= 5%		readings >5 <= 10%		readings >10 <= 15%		readings >15 <= 20%	
										number	percent	number	percent	number	percent	number	percent
Mar	7440	0	201	7239	7238	99.99	1.62	1.1	4.92	7098	98.07	118	1.63	12	0.17	10	0.14
Apr	7200	4718	64	2418	2418	100.00	1.93	0.83	4.42	2362	97.68	42	1.74	13	0.54	1	0.04
May	7440	2799	116	4525	4504	99.54	2.03	0.8	4.43	4431	98.38	69	1.53	2	0.04	2	0.04
Jun	7200	5860	30	1310	1310	100.00	0.53	0.29	1.4	1309	99.92	1	0.08	0	0.00	0	0.00
Jul	7440	2187	142	5111	5111	100.00	0.8	0.34	1.82	5108	99.94	2	0.04	1	0.02	0	0.00
Aug	7440	6730	18	692	692	100.00	1.21	0.48	2.65	690	99.71	1	0.14	1	0.14	0	0.00
Sep	7200	2970	107	4123	4121	99.95	1.05	0.95	3.9	4093	99.32	21	0.51	4	0.10	3	0.07
Totals	51,360	25,264	678	25,418	25,394					25,091		254		33		16	
Weighted Average						99.91					98.81		1.00		0.13		0.06
Cummulative											99.81		99.94		100.00		

AQD #82, ""D" Train Dryer, Dryer #6

2001	readings possible	unit down	monitor outage or calib/audit	available readings	readings <= 20%	percent <= 20%	average <= 20%	std dev <= 20%	Ave+3std	readings <= 5%		readings >5 <= 10%		readings >10 <= 15%		readings >15 <= 20%	
										number	percent	number	percent	number	percent	number	percent
Apr	7200	784	162	6254	6156	98.43	2.61	1.6	7.41	5863	95.24	222	3.61	52	0.84	19	0.31
May	7440	1026	189	6225	6222	99.95	2.77	0.31	3.7	6199	99.63	21	0.34	2	0.03	0	0.00
Jun	7200	243	184	6773	6766	99.90	2.96	0.57	4.67	6753	99.81	11	0.16	1	0.01	1	0.01
Jul	7440	10	186	7244	7225	99.74	3.61	0.79	5.98	7077	97.95	138	1.91	8	0.11	2	0.03
Aug	7440	286	180	6974	6799	97.49	4.61	0.88	7.25	6514	95.81	248	3.65	18	0.26	19	0.28
Sep	7200	0	187	7013	6953	99.14	2.58	1.13	5.97	6855	98.59	57	0.82	19	0.27	22	0.32
Oct	7440	11	206	7223	7177	99.36	3.01	1.62	7.87	6816	94.97	265	3.69	70	0.98	26	0.35
Totals	51,360	2,360	1,294	47,706	47,298					46,077		962		170		89	
Weighted Average						99.14					97.42		2.03		0.36		0.19
Cummulative											99.45		99.81		100.00		